



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|-----------------------------|---------------------|------------------|
| 10/550,698 | 09/27/2005 | Eric Perraud | SC12528ET | 3790 |
| 23125 7590 09/03/2009 FREESCALE SEMICONDUCTOR, INC. LAW DEPARTMENT 7700 WEST PARMER LANE MD:TX32/PL02 AUSTIN, TX 78729 | | | | |
| EXAMINER HO, CHUONG T | | | | |
| ART UNIT 2419 | | PAPER NUMBER | | |
| NOTIFICATION DATE 09/03/2009 | | DELIVERY MODE ELECTRONIC | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USADOCKETING@FREESCALE.COM

Office Action Summary

Application No.

10/550,698

Applicant(s)

PERRAUD ET AL.

Examiner

CHUONG T. HO

Art Unit

2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed 05/94/09 have been entered and made of record.
2. Applicant's arguments with respect to claims 11-28 have been considered but are moot in view of the new ground(s) of rejection.
3. Claims 11-28 are pending.

Drawings

4. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings have labeled WO 2004/086693, PCT/EP2004/050311. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

5. The abstract of the disclosure is objected to because A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims . Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 11-12, 15, 17-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman (Patent No.: US 6,393,000 B1) in view of Wang (Patent Number: 7,146,314 B2).

Regarding to claim 11, Feldman '000 disclose detecting local conversational activity at each of said terminals (figure 1, station 4) respectively (figure 8, Voice activity detector, col. 4, lines 60-67, col. 5, lines 1-30), sending conversational activity signals indicative of the local conversational activity condition from each of said terminals to the other terminal (Abstract, the principal signal) (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) ; controlling said reception and transmission means to communicate by half- duplex transmission of said conversational data packets in response to conversational activity at a first one of said terminals but not at the second one of said terminals (col. 1, lines

65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) ;

However, Feldman '000 are silent to disclosing at least partially deactivating said reception means at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption.

Wang '314 from the same or similar fields of endeavor disclose at least partially deactivating said reception means at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption (according to the Specification in page 8, lines 30-32 defines at least partially deactivates either the reception means in the absence of remote conversational activity or said transmission means in the absence of local conversational activity so as to reduce power consumption) (Wang '314 disclose in col. 4, lines 55-65, VOX is a voice controlled, half-duplex device (half-duplex transmit data in two directions, but not at the same time.....half duplex VOX transmit the voice otherwise, half duplex VOX only receives the data signal from the other side...There is a saving of transmission power)

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Wang '314 into the system of Feldman '000, since Wang '314 recited the motivation in the col. 4, lines 55-65 which saves transmission

power, also useful in energy saving non-battery devices. Bandwidth of transmission is saved.

Regarding to claim 12, Feldman '000 disclose wherein controlling said reception means and said transmission means comprises at least partially switching off the supplies of power to said reception means and said transmission means (figure 8, col. 5, lines 1-30).

Regarding to claim 15, Feldman '000 disclose wherein said conversational data packets comprise voice signals and the duration of said time periods corresponds to a phoneme period (col. 3, lines 18-27).

Regarding to claim 17, Feldman '000 disclose wherein said conversational activity signals are distinct from said conversational data packets (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 18, Feldman '000 disclose wherein said local conversational activity detection is performed during each of said time periods at each of said terminals, and said conversational activity signals are sent from each of the terminals to the other terminal at least once during each of said time periods (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 19, Feldman '000 disclose where conversational activity signals are sent from each of the terminals to the other terminal in the same time slot pair and control the half-duplex (see abstract, half-duplex) transmission direction for the next time period ((col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 20, Feldman '000 disclose wherein at least a first one of said terminals communicates with a third terminal over a further communication link, said first terminal signalling a conversational activity signal indicative of conversational activity generated at said third terminal (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 21, Feldman '000 disclose wherein the same activity procedure is used in synchronization between all said terminals (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

Regarding to claim 22, Feldman '000 disclose wherein a different activity procedure is used in synchronization between one of said terminals and another of said terminals (A) than between said one of said terminals and a third one of said terminals (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) .

Regarding to claim 23, Feldman '000 disclose wherein said further communication link is a cellular telephone link (col. 7, lines 5-35, GSM, TDMA, time frame)

Regarding to claim 24, Feldman '000 disclose A terminal comprising:
reception and transmission means for use in processing said conversational data packets respectively, sending conversational activity signals (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES)

(col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting);

radio link means for communicating conversational data packets over said radio link capable of full-duplex (col. 5, lines 60-67, full-duplex) transmission of conversational data packets in alternate directions within a pair of time slots (col. 3, lines 15-35, time slots) , said communication comprising time periods (col. 7, lines 5-30, time frame) each comprising a set of said pairs of time slots (col. 7, lines 5-30, time frame);

conversational activity detection means for detecting local conversational activity at said terminal, signaling means for sending in each of said periods a conversational activity signal indicative of the local conversational activity from the local terminal to said other terminal (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting) and control means responsive to conversational activity occurring at a first one of said terminals and not occurring at the second one of said terminals for controlling said reception and transmission means to communicate by half-duplex transmission of said conversational data packets (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate

the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

However, Feldman '000 are silent to disclosing at least partially deactivating said reception means at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption.

Wang '314 from the same or similar fields of endeavor disclose at least partially deactivating said reception means at said first terminal and said transmission means at said second terminal during said half-duplex transmission so as to reduce their power consumption (according to the Specification in page 8, lines 30-32 defines at least partially deactivates either the reception means in the absence of remote conversational activity or said transmission means in the absence of local conversational activity so as to reduce power consumption) (Wang '314 disclose in col. 4, lines 55-65, VOX is a voice controlled, half-duplex device (half-duplex transmit data in two directions, but not at the same time.....half duplex VOX transmit the voice otherwise, half duplex VOX only receives the data signal from the other side...There is a saving of transmission power)

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Wang '314 into the system of Feldman '000, since Wang '314 recited the motivation in the col. 4, lines 55-65 which saves transmission power, also useful in energy saving non-battery devices. Bandwidth of transmission is saved.

Regarding to claim 25, Feldman '000 disclose wherein said control means comprises means for at least partially switching off the supplies of power to said reception means and said transmission means during said half-duplex transmission (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting).

8. Claims 13, 26 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Feldman '000 - Wang '314) in view of Chauffour et al. (Patent Number: 5,870,397).

Regarding to claim 13, the combined system (Feldman '000 - Wang '314) disclose the limitations of claim 11 above.

However, the combined system (Feldman '000 - Wang '314) are silent to disclosing wherein controlling said reception and transmission means comprises generating audible comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission.

Chauffour '397 disclose wherein controlling said reception and transmission means comprises generating audible comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission (col. 2, generating the noise which interleaved between the voice packets received from the transmitting side) (col. 3, lines 332-35, a Voice Activity Detector (VAD) function is used to detect the silent packets of the input voice packet stream).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Chauffour '397 into the combined system (Feldman '000 - Wang '314), since Chauffour '397 recited the motivation in the col. 2, lines 28-32 which provides a method and a system for silence removal independent from the voice coding or voice compression algorithms.

Regarding to claim 26, the combined system (Feldman '000 - Wang '314) disclose the limitations of claim 23 above. However, the combined system (Feldman '000 - Wang '314) are silent to disclosing wherein said control means comprises means for generating audible comfort noise from a locally generated comfort noise signal during said half-duplex transmission.

Chauffour '397 disclose wherein said control means comprises means for generating audible comfort noise from a locally generated comfort noise signal during said half-duplex transmission (col. 2, generating the noise which interleaved between the voice packets received from the transmitting side) (col. 3, lines 332-35, a Voice

Activity Detector (VAD) function is used to detect the silent packets of the input voice packet stream).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Chauffour '397 into the combined system (Feldman '000 - Wang '314), since Chauffour '397 recited the motivation in the col. 2, lines 28-32 which provides a method and a system for silence removal independent from the voice coding or voice compression algorithms.

Regarding to claim 27, the combined system (Feldman '000 - Wang '314) disclose the limitations of claim 12 above. However, the combined system (Feldman '000 - Wang '314) are silent to disclosing wherein controlling said reception and transmission means comprises generating audible comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission.

Chauffour '397 disclose wherein controlling said reception and transmission means comprises generating audible comfort noise at said first terminal from a locally generated comfort noise signal during said half-duplex transmission (col. 2, generating the noise which interleaved between the voice packets received from the transmitting side) (col. 3, lines 332-35, a Voice Activity Detector (VAD) function is used to detect the silent packets of the input voice packet stream).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Chauffour '397 into the combined system

(Feldman '000 - Wang '314), since Chauffour '397 recited the motivation in the col. 2, lines 28-32 which provides a method and a system for silence removal independent from the voice coding or voice compression algorithms.

9. Claims 14, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Feldman '000 - Wang '314) in view of Wajda et al. (Patent No.: US 6,711,584 B1). Wajda '584

Regarding to claim 14, the combined system (Feldman '000 - Wang '314) disclose the limitations of claim 11 above.

However, the combined system (Feldman '000 - Wang '314) are silent to disclosing wherein said conversational data packets are communicated without return transmission of acknowledgement signals.

Wajda '584 disclose wherein said conversational data packets are communicated without return transmission of acknowledgement signals (col. 9, lines 55-60, speech information is to be exchanged in the framework of a conversation.....without acknowledgement of received data is requested).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Wajda '584 into the combined system (Feldman '000 - Wang '314), since Wajda '584 recited the motivation in the col. 2, lines 15-25, which determines in a simple convenient manner features of a communication relation

which meet the desired requirement at a given time so that the communication relation can be established based these features.

Regarding to claim 28, the combined system (Feldman '000 - Wang '314) disclose the limitations of claim 12 above.

However, the combined system (Feldman '000 - Wang '314) are silent to disclosing wherein said conversational data packets are communicated without return transmission of acknowledgement signals.

Wajda '584 disclose wherein said conversational data packets are communicated without return transmission of acknowledgement signals (col. 9, lines 55-60, speech information is to be exchanged in the framework of a conversation.....without acknowledgement of received data is requested).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Wajda '584 into the combined system(Feldman '000 - Wang '314), since Wajda '584 recited the motivation in the col. 2, lines 15-25, which determines in a simple convenient manner features of a communication relation which meet the desired requirement at a given time so that the communication relation can be established based these features.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Feldman '000 - Wang '314) in view of Mito et al. (Pub. No.: US 2002/0172185 A1).

Regarding to claim 16, Feldman '000 disclose wherein said conversational data packets are transmitted between said terminals over said radio link (col. 1, lines 65—col. 2, lines 2, the first station transmit a silence code to the second station and the third station) (col. 2, lines 10-15, the first station transmits the signal including the data signal in such way that it does not activate the facsimile at the second station, but activate the third station to receive data) (col. 6, lines 30-50, the LES 4 sends an idle code to MES) (col. 5, lines 60-67, both facsimile terminals operate in half-duplex mode, so that they cannot receive data whilst they are transmitting)

However, the combined system (Feldman '000 - Wang '314) are silent to disclosing wherein said conversational data packets are transmitted between said terminals over said radio link substantially in conformity with the Bluetooth standard.

Mito '185 disclose wherein said conversational data packets are transmitted between said terminals over said radio link substantially in conformity with the Bluetooth standard (see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Mito '185 into the combined system(Feldman '000 - Wang '314), since Mito '185 recited the motivation in the paragraph [0025] which improve the use efficiency of time division channels and reducing useless power consumption.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571)272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sheikh Ayaz can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chuong. T. Ho/
Examiner, Art Unit 2419
/Ayaz R. Sheikh/
Supervisory Patent Examiner, Art Unit 2419